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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,388	09/11/2003	Kyung Chan Park	1740-000057/US	3783
30593	7590	03/16/2009		
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER ALUNKAL, THOMAS D	
			ART UNIT	PAPER NUMBER
			2627	
			MAIL DATE	DELIVERY MODE
			03/16/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/659,388	<b>Applicant(s)</b> PARK, KYUNG CHAN	
	<b>Examiner</b> THOMAS D. ALUNKAL	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-7,10 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,10 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/2/09 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-3, 5-7, 10, and 16-18 have been fully considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 10, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu et al. (hereafter Muramatsu)(US 6,535,477) and in view Nakajima et al. (hereafter Nakajima)(US PgPub 2001/0036134).

Regarding claim 1, Muramatsu discloses a high-density read-only optical disc including a Lead-In area, a data area, and a Lead-Out area (Figure 1), comprising: the Lead-in area including a specific area having a bi-phased High Frequency Modulated groove (Figure 7, Element 12 and Column 6, lines 46-67) and patterns of straight pits formed on the basis of the HFM groove (Figure 7, Elements 14A-14C). Muramatsu does not specifically disclose that the same tracking servo operation can be performed over the whole data area of the disc. In the same field of endeavor, Nakajima discloses an optical disc with a mark string provided in the lead-in area of the disc, which provides a tracking servo signal that is constant over the entire disc (Figure 13A and Paragraph 0147).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the tracking servo means of Nakajima to the recording/reproducing apparatus of Muramatsu, motivation being to provide a single tracking servo operation over the entire disc without the need for separate tracking servo operations in different regions of the disc (Paragraph 0147 of Nakajima). Furthermore, a single tracking servo operation over the entire disc results in reduced tracking time.

Regarding claim 2, Muramatsu discloses wherein the specific area contains principal information of the high-density read-only optical disc (Figure 2 which discloses the control data area located within the lead-in area).

Regarding claim 3, Muramatsu discloses wherein the specific area is an area that would correspond in a high-density writable optical disc to a PIC area, for permanently storing principal disc information (Figure 2).

Regarding claim 5, Muramatsu discloses wherein the patterns comprise pairs of mark and space and each of the pairs of the mark and the space is repeatedly recorded in a predetermined period with a different unique pit length according to a data value representing the recording period, the predetermined recording period being associated with the HFM groove (Figures 5-10).

Regarding claim 6, Muramatsu discloses wherein the sum of pit lengths of each pair of the mark and the space is constant, irrespective of a representative data value of the recording period (Figures 5-7 where the sum of the pit lengths of each pair of the mark and the space is constant).

Regarding claim 7, this claim recites limitations substantially similar to those in claim 1 and is rejected for the reasons provided above.

Regarding claim 10, Nakajima discloses wherein the servo operation is a DPD (Differential Phase Detection) method (Paragraph 0147).

Apparatus claim 16 is drawn to the apparatus corresponding to the method of using the same as claimed in claim 7. Therefore apparatus claim 16 corresponds to method claim 7, and is rejected for the same reasons of obviousness as used above.

Regarding claim 17, Muramatsu discloses wherein the reproducing device includes an optical pickup unit configured to read the data recorded in a lead-in area and read the data recorded in a user information area and a servo unit configured to

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drive the optical pickup unit (The optical pickup and servo unit are provided in the recording/reproducing apparatus disclosed in Column 4, lines 37-62.).

Regarding claim 18, Nakajima discloses wherein the servo unit is configured to perform a servo operation by a Differential Phase Detection (DPD) method (Paragraph 0147).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Karakawa et al. (US PgPub 2002/0054555) discloses an information storage apparatus and information reproducing method. Yamada (US 5,737,284) discloses an optical disc drive having accessing from a current position within a lead-in area. Schell et al. (US 6,243,336) disclose an optical disc system having a servo motor and servo error detection assembly. Horie et al. (US 5,862,123) disclose an optical phase-change disc. Horimai et al. (US 6,128,272) disclose a high-density recording medium. Gotoh et al. (US 6,125,181) disclose a recording method wherein a piracy prevention barcode is encrypted in the disk's management area. Sako et al. (US 7,215,610) discloses an apparatus for and method of recording/reproducing audio data embedded with additive information. Nakajima et al. (US PgPub 2002/0001274) discloses an optical recording medium recorded with information in depth direction.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/  
Examiner, Art Unit 2627

/Wayne Young/  
Supervisory Patent Examiner, Art Unit 2627